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BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Seventh Floor
12400 Wilshire Boulevard
Los Angeles, CA 90025

EXAMINER

NGUYEN, THU HA T

ART UNIT PAPER NUMBER

2155

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,854

Applicant(s)

STACHURA ET AL.

Examiner

Thu Ha T. Nguyen

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims **31-72** are presented for examination.
2. Claims 68-72 are newly added.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 21, 2006 has been entered.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. The analysis under 35 U.S.C. 112, first paragraph, requires that the scope of protection sought be supported by the specification disclosure. The pertinent inquiries include determining (1) whether the subject matter defined in the claims is described in the specification and (2) whether the specification disclosure as a whole is to enable one skilled in the art to make and use the claimed invention.

(1) Claims 31, 39, 45, 56, and 61 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s)

Art Unit: 2155

contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The "invention" for the purpose of the first paragraph analysis is defined by the claims. The description requirement is simply that the claimed subject matter must be described in the specification. The function of the description requirement is to ensure that the applicant had possession of the invention on the filing date of the application. The application need not describe the claim limitations exactly, but must be sufficiently clear for one of ordinary skill in the art to recognize that the applicant's invention encompasses the recited limitations. The description requirement is not met if the application does not expressly or inherently disclose the claimed invention.

Specification does not explicitly describe nor is sufficiently clear for one of ordinary skill in art to recognize the following steps as recited in claim 13 in bold-faced amended terms: "without executing network layer software stacks for each protocol layer".

This claimed limitation has not found or supported by the specification. Rather, in the specification page 15, lines 9-11, shown "the PC and the IC 10 need not execute **full** network layer software stacks for each protocol layer". Since in the claimed language recited "without executing network layer software stacks for each protocol layer". The examiner has given broad interpretation as the operation does not need executing any network layer software stacks at all for each protocol layer. While, the invention states that there is no need execute **full** network layer software stacks for

Art Unit: 2155

each protocol layer. It does not mean that the operation without executing network layer software stacks for each protocol layer at all.

(2) Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The enablement requirement necessitates a determination that the disclosure contains sufficient teaching regarding the subject matter claimed as to enable one skilled in the pertinent art to make and use the claimed invention. In essence, the scope of enablement provided to one ordinarily skilled in the art by the disclosure must be commensurate with the scope of protection sought by the claims.

Currently, the most prevalent standard for measuring sufficient enablement to meet the requirements of 112 is that of "undue experimentation". The test is whether, at the time of the invention, there was sufficient working procedure for one skilled in the art to practice the claimed invention without undue experimentation. It is important to note that the test of enablement is not whether any experimentation is necessary, but whether, if experimentation is necessary, is it undue. A skilled artisan is given sufficient direction or guidance in the disclosure. Moreover, the experimentation required, in addition to not being undue, must not require ingenuity beyond that expect of one of ordinary skill in the art.

Undue experimentation and ingenuity would be required beyond one ordinarily skilled in the art to practice the following recited limitation in claim 13:

Art Unit: 2155

“without executing network layer software stacks for each protocol layer”

Undue experimentation would be needed to allow “without executing network layer software stacks for each protocol layer”. While in the specification page 15, lines 9-11, shown “the PC and the IC 10 need not execute full network layer software stacks for each protocol layer. Thus, there is a contradiction.

Appropriate correction is required.

Response to Arguments

6. Applicant's arguments filed April 21, 2006 have been fully considered but they are not persuasive because of the following reasons:

7. Applicant argues that Spencer does not teach or suggest generating on an integrated circuit, without executing network layer software stacks for each protocol layer. In response to applicant's argument, since Spencer does not clear state that the SNMP trap PDU is generated by executing a full implementation of network layer software stacks, thus the examiner concludes that Spencer does teach the feature of generating on an integrated circuit, without executing network layer software stacks for each protocol layer, a packet on an integrated circuit, the packet based on the packet template as shown in col. 6, lines 50-65, col. 7, line 42-col. 9, line 3.

8. As a result, cited prior art does disclose a creation of valid SNMP-trap packets, as broadly claimed by the Applicants. Applicants clearly have still failed to identify specific claim limitations that would define a clearly patentable distinction over prior art.

Art Unit: 2155

9. Therefore, the examiner asserts that cited prior art teaches or suggests the subject matter broadly recited in independent claims 31, 39, 45, 56 and 61. Claims 32-38, 40-44, 46, 55, 57-60 and 62-72 are also rejected at least by virtue of their dependency on independent claims and by other reasons set forth in this office action below. Accordingly, claims 31-72 are rejected.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 31-36, 38-42, 44-48, 51, 53-57, 59-64, 66 and 68-72 are rejected under 35 U.S.C. § 102(e) as being anticipated by **Spencer** U.S. Patent No. **6,253,243**.

12. As to claim 31, **Spencer** teaches the invention as claimed, including a method comprising:

accessing a packet template in a memory, the packet template having at least one static field (col. 6, line 55-col. 7, line 41, col. 7, line 65-col. 9, line 3); and

in response to an indication of an event, generating on an integrated circuit, without executing network layer software stacks for each protocol layer, a packet on an

Art Unit: 2155

integrated circuit, the packet based on the packet template (col. 6, lines 50-65, col. 7, line 42-col. 9, line 3).

13. As to claim 32, **Spencer** teaches the invention as claimed, additionally comprising transmitting the packet to a communication controller for transmission over a shared medium (figure 4, element 414, col. 3, lines 1-10, col. 6, lines 29-31).

14. As to claim 33, **Spencer** teaches the invention as claimed, additionally comprising generating the packet template in response to receiving data to be used as the packet template (col. 6, lines 50-65, col. 7, line 42-col. 9, line 3).

15. As to claim 34, **Spencer** teaches the invention as claimed, wherein the packet template includes at least two protocol layers, each of the at least two protocol layers including at least two static fields (col. 6, line 59-col. 7, line 41, col. 8, lines 5-16).

16. As to claim 35, **Spencer** teaches the invention as claimed, wherein one of the at least two protocol layers includes an SNMP (Simple Network Management Protocol) layer (figure 5, col. 3, lines 1-10, col. 6, lines 50-65).

17. As to claim 36, **Spencer** teaches the invention as claimed, wherein the generated packet includes a SNMP trap PDU (protocol data unit) (col. 3, lines 1-10, col. 6, lines 50-65).

18. As to claim 38, **Spencer** teaches the invention as claimed, wherein said generating the packet comprises inserting one or more non-static data into the packet (col. 6, lines 50-65, col. 7, line 42-col. 9, line 3).

19. As to claim 39, **Spencer** teaches the invention as claimed, including a method comprising:

receiving data to be used to create a packet template (col. 6, lines 50-65);
generating the packet template, the packet template including at least one static field (col. 6, lines 50-65, col. 7, line 42-col. 9, line 3);
storing the packet template in a memory (col. 6, lines 50-65, figure 4, element 422);
receiving an indication of an event (col. 3, lines 1-8); and
generating on an integrated circuit, without executing network layer software stacks for each protocol layer, a packet based on the packet template (col. 6, lines 50-65, col. 7, line 42-col. 9, line 3).

20. As to claim 45, **Spencer** teaches the invention as claimed, including an apparatus comprising:

a memory to store at least one packet template, the at least one packet template having at least one static field (col. 6, line 55-col. 7, line 41, col. 7, line 65-col. 9, line 3);
and

a packet generator to generate on an integrated circuit, without executing network layer software stacks for each protocol layer, a packet based on one of the at least one packet template (col. 6, lines 50-65, col. 7, line 42-col. 9, line 3).

21. As to claim 46, **Spencer** teaches the invention as claimed, additionally comprising an event processor to receive an indication of one or more events, and to notify the packet generator of the one or more events (figure 4, elements 141, 420, col. 6, lines 24-65).

22. As to claim 47, **Spencer** teaches the invention as claimed, wherein one of the one or more events includes a software-generated event from a CPU (central processing unit) (figures 2, 4, col. 6, lines 24-34).

23. As to claim 48, **Spencer** teaches the invention as claimed, wherein one of the one or more events include an external event (figures 2, 4, col. 5, lines 28-41, col. 6, lines 24-34).

24. As to claim 51, **Spencer** teaches the invention as claimed, additionally including a bus control module to receive at least one packet template from a CPU (central processing unit) (figure 4).

25. As to claim 54, **Spencer** teaches the invention as claimed, wherein the SNMP trap PDU comprises a UDP (User Datagram Protocol) packet portion (col. 3, lines 1-10, col. 6, lines 50-65, col. 16, lines 55-62).

26. As to claim 55, **Spencer** teaches the packet consists of UDP trap information (col. 16, lines 57-62). However, **Spencer** does not explicitly teach the complete checksum is stored in the UDP packet portion. This feature is deemed to be inherent to Spencer system because UDP, similar to TCP, is a communication message protocol that sends data units from one network element to another. UDP consists of a checksum that has the capability to verify if the data arrive intact.

27. As to claim 56, **Spencer** teaches the invention as claimed, including a system comprising:

a network interface card having a communications controller (figure 4, element 414); and

an integrated circuit coupled to the network interface card (figure 4), the integrated circuit including:

a memory to store at least one packet template, the at least one packet template having at least one static field (col. 6, line 55-col. 7, line 41, col. 7, line 65-col. 9, line 3); and

a packet generator to generate on the integrated circuit, without executing network layer software stacks for each protocol layer, and in response to an indication

Art Unit: 2155

of an event, a packet based on one of the at least one packet template (col. 6, lines 50-65, col. 7, line 42-col. 9, line 3).

28. As to claim 57, **Spencer** teaches the invention as claimed, additionally comprising an event processor to receive an indication of one or more events, and to notify the packet generator of the one or more events (figure 4, elements 141, 420, col. 6, lines 24-65).

29. As to claim 59, **Spencer** teaches the invention as claimed, wherein the packet comprises an SNMP (Simple Network Management Protocol) trap PDU (protocol data unit) (col. 3, lines 1-10, col. 6, lines 50-65, col. 16, lines 55-62).

30. As to claim 60, **Spencer** teaches the invention as claimed, wherein the SNMP trap PDU comprises a UDP (User Datagram Protocol) packet portion (col. 3, lines 1-10, col. 6, lines 50-65, col. 16, lines 55-62).

31. As to claim 61, **Spencer** teaches the invention as claimed, including a method comprising:

in response to an indication of an event, generating a packet on an integrated circuit, without executing network layer software stacks for each protocol layer, the packet based on a packet template (col. 6, lines 50-65, col. 7, line 42-col. 9, line 3); and

transmitting the packet to a communication controller for transmission over a shared medium (figure 4, col. 3, lines 1-10, col. 6, lines 24-65).

32. As to claim 62, **Spencer** teaches the invention as claimed, wherein said indication of an event comprises receiving an event code and event data (col. 2, lines 36-62- Note that Spencer disclosed the event notifications are managed object based alarms stored in an alarm log. This feature is deemed to be inherent that a managed object based alarm comprises event code and data.

33. As to claim 63, **Spencer** teaches the invention as claimed, additionally comprising storing the event code and event data in the packet template (col. 2, lines 36-62- Note that Spencer disclosed the event notifications are managed object based alarms stored in an alarm log. This feature is deemed to be inherent that a managed object based alarm comprises event code and data.

34. As to claim 64, **Spencer** teaches the invention as claimed, additionally comprising storing a timestamp and sequence number in the packet template (col. 7, lines 5-41, col. 14, lines 29-58).

35. As to claim 66, **Spencer** teaches the invention as claimed, additionally comprising determining one or more static fields of the packet template (col.6, line 59- col. 7, line 41).

36. As to claim 68, **Spencer** teaches the invention as claimed in claim 61, wherein said generating a packet on an integrated circuit, without executing network layer software stacks for each protocol layer, the packet based on a packet template is performed substantially independently of a central processing unit (col. 6, lines 50-65, col. 7, line 42-col. 9, line 3).

37. Claims 40-42, 44, 53, 57, 59-60 and 69-72 have similar limitations as claims 34-36, 38, 46, 54 and 68; therefore, they are rejected under the same rationale.

Claim Rejections - 35 USC § 103

38. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

39. Claims 37 and 43 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Spencer** U.S. Patent No. **6,253,243**, in view of **Cromer et al.** (hereinafter **Cromer**) U.S. Patent No. **6,357,007**.

40. As to claim 37, **Spencer** does not explicitly teach an ASIC (application specific integrated circuit). However, **Cromer** teaches wherein the integrated circuit comprises an ASIC (application specific integrated circuit) (abstract, figure 2, element 4). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teachings of **Spencer** and **Cromer** to include an ASIC because it would provide advance alerting/notifying of interruptions/events for monitoring network devices.

41. Claim 43 has similar limitations as claim 37; therefore, they are rejected under the same rationale.

42. Claims 49-50, 52, 58, 65, and 67 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Spencer** U.S. Patent No. **6,253,243**, in view of **Matchefts et al.** (hereinafter Matchefts) U.S. Patent No. **6,330,600**.

43. As to claim 49, **Spencer** does not explicitly teach the concept of polling. However, **Matchefts** teaches wherein the external event is polled from a device (col. 2, lines 18-34, col. 6, lines 4-45). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to modify the teachings of **Matchefts** to include the polling concept into the system as disclosed by **Spencer** because it will randomly check the status of network elements to provide and improve a extensive monitoring of network events.

44. As to claim 50, **Spencer** teaches the invention as claimed, wherein: the event processor additionally sends an event code and event data to the packet generator (col. 2, lines 36-62- Note that Spencer disclosed the event notifications are managed object based alarms stored in an alarm log. This feature is deemed to be inherent that a managed object based alarm comprise event code and data); and the packet generator generates a packet based on one of the at least one packet templates by: accessing the packet template in the memory (col. 6, lines 50-65, col. 7, line 42-col. 9, line 3); storing the event code and the event data in the packet template (col. 6, line 55-col. 7, line 41, col. 7, line 65-col. 9, line 3) and transmitting the packet template to a communication controller for transmission over a shared medium (figure 4, col. 3, lines 1-10, col. 6, lines 24-65). However, **Spencer** does not explicitly teach the checksum calculation and comparison. **Matchefts** teaches the packet template including a partial checksum (col. 6, lines 4-16, col. 7, lines 52-55); calculating a complete checksum based on the partial checksum, and based on the at least one static field (col. 7, lines 48-65, col. 8, lines 55-67, col. 9, lines 1-6); storing the complete checksum in the packet template (col. 7, lines 48-65). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to modify the teachings of **Matchefts** to include the checksum calculation and comparison in the system of **Spencer** because it will verify if the complete transmission was received and prevent out-of-order sequencing.

45. As to claim 52, **Spencer** does not explicitly teach the invention as claimed; however, **Matchefts** teaches wherein the bus control module additionally receives a partial checksum from the CPU (col. 6, lines 4-16, lines 46-64, col. 7, lines 52-55). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to combine the teaching of **Spencer Matchefts** to have the same motivation as set forth in claim 50, *supra*.

46. As to claim 65, **Spencer** does not explicitly teach calculating and storing the complete checksum. However, **Matchefts** teaches calculating a complete checksum and storing the complete checksum in the packet template (col. 7, lines 48-65, col. 8, lines 55-67, col. 9, lines 1-6). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to modify the teachings of **Matchefts** to include the checksum calculation and comparison in the system of **Spencer** because it will verify if the complete transmission was received and prevent out-of-order sequencing and the complete checksum is important to verify if the data arrive intact.

47. As to claim 67, **Spencer** does not teach the concept of polling. However, **Matchefts** teaches wherein the indication of an event is generated in response to polling a device that does not have a normal status (col. 2, lines 18-34, col. 6, lines 4-45). It would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention was made to modify the teachings of **Matchefts** to include the

Art Unit: 2155

polling concept into the system as disclosed by **Spencer** because it will randomly check the status of network elements to provide and improve a extensive monitoring of network events.

48. Claim 58 has similar limitations as claim 50; therefore, they are rejected under the same rationale.

Conclusion

49. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (see PTO 892 attached herein).

50. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Ha Nguyen, whose telephone number is (571) 272-3989. The examiner can normally be reached Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Najjar Saleh, can be reached at (571) 272-4006.

The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 2155

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Thu Ha Nguyen', with a stylized flourish at the end.

Thu Ha Nguyen

July 21, 2006